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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,435	11/21/2001	Sachiyo Tsuda	111182	1591
25944	7590	03/24/2004		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320				EXAMINER TUGBANG, ANTHONY D
				ART UNIT 3729
				PAPER NUMBER 3729

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/989,435	TSUDA ET AL.
	Examiner	Art Unit
	A. Dexter Tugbang	3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on _____.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-6 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) _____ is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/21/01</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: the term "its" (line 8) is awkwardly worded and should be replaced with the term --a--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 1, the phrase of "where the widened...of the wire" (lines 6-7) is confusing and misleading and appears to be misplaced. It appears that the phrase should be placed within the step of "bending...in a die" (lines 9-11) and not within the step of "forming...direction" (lines 5-8). The confusion is raised with the latter phrase of "by upsetting the wire..." (lines 7-8) as to whether the upsetting is performed when the widened end and swollen portions are formed, or when the widened end portion is bent.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2 and 4-8, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by UK Patent Publication GB 2165612, referred to hereinafter as GB'612.

GB'612 discloses a method of manufacturing a wire segment comprising: forming a widened end portion 4 at one end of a wire and a swollen end portion 1 on a rear surface of the wire at a bending portion by upsetting the wire in a longitudinal direction (see page 1, lines 119-126); and bending the widened portion toward the front surface of the wire while tightly holding the widened end portion and the swollen portion in a die (shoe soles 7, 8 in Fig. 2).

Regarding Claim(s) 2, the act of driving the wire into the die (soles 7, 8) by such means of a hammer, is equivalent to “heading...portion” (lines 2-4).

Regarding Claim(s) 4 and 5, the widened portion 4 of GB'612 is widened to an asymmetrical shape of a square shaped cross-section with respect to a centerline axis of the wire by upsetting at least once. The widened portion 4 is again upset by bending the widened portion first in a horizontal direction, and then in an upward nearly vertical direction, to form a slant angle (U-shape) with respect to the centerline axis of the original wire (as shown in Fig. 2).

Regarding Claim(s) 6, GB'612 further forms a tapered portion 6 (in Fig. 1) having a tapered surface slanted in a direction corresponding to the slant angle. The tapered portion 6 is formed before upsetting the widened portion 4 (see page 2, lines 1-8).

Regarding Claim(s) 7 and 8, GB'612 further teaches forming a projected end (apex or point at the end of portion 5 in Figs. 1 and 7).

Art Unit: 3729

6. Claims 1, 2 and 9, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Apple 1,742,190.

Regarding Claim(s) 1 and 9, Apple discloses a method of combining a plurality of wire segments (in Fig. 2) into a rotor winding of a rotational electric machine (see Fig. 6) by: forming a widened end portion 21 (in Fig. 3) at one end of a wire and a swollen end portion 20 on a rear surface of the wire at a bending portion by upsetting the wire in a longitudinal direction; and bending the widened portion toward the front surface of the wire (from the shape shown in Fig. 2) while tightly holding the widened end portion and the swollen portion in a die or rollers (see page 2, lines 21-33).

Regarding Claim(s) 2, the step of “heading...portion” (lines 2-4) is met by Apple by the act of moving the wire through the die or rollers.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over either GB'612 or Apple.

The relative thicknesses between the swollen end portion T and the metallic wire t does not appear to be mentioned by either GB'612 or Apple. The parameters of T, t defined by the equation in Claim 3 are considered to be effective variables to achieve a desired result through

routine experimentation. *In re Aller*, 220, F.2d 454, 105 USPQ 233, 235 (CCPA 1955).

Therefore, the limitations drawn to the equation regarding the relative thicknesses between the swollen end portion T and the metallic wire t have not been given patentable weight to the extent that the equation does not impact or materially effect the method steps or would have been an obvious improvement over either GB'612 or Apple through routine experimentation.

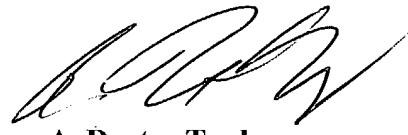
Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 703-308-7599. The examiner can normally be reached on Monday - Friday 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**A. Dexter Tugbang
Primary Examiner
Art Unit 3729**

March 21, 2004